

Cyrtandra megistocalyx (Gesneriaceae), a New Species from Oahu,
Hawaiian Islands

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ONE'S WORK seems never done. Though in 1966 the writer published (Bishop Museum, Bull. 229) a monographic account of twenty-five years of study of *Cyrtandra*, he now presents, as a supplement, one more species from the island of Oahu, Hawaiian Islands.

Cyrtandra megistocalyx sp. nov. (Sect. *Cylindrocalyces*)

Fig. 1

DIAGNOSIS HOLOTYPE: Frutex 2 m alta, caule 2 cm diametro, ramulis glabris viridibus tum brunneis quadrangularibus teretibus in sicco contractis, cicatricibus separatis 2.5–3 mm altis scutelliformibus stramineis suberosis, cicatricibus fascium 5, novellis subadpressiter brunnei-pilosis, ramulis foliosis 2–4 mm diametro subteretibus cito glabris, internodis 5–25 mm plerumque 15 mm longis, *foliis* oppositis non aggregatis adscendentibus sed vetustioribus paucis divergentibus inaequalibus in 5–10 nodis superis affixis, folio uno paris cuiusque $\frac{1}{8}$ – $\frac{1}{2}$ minori, petiolis 15–36 mm longis gracilibus in juventa adpressiter brunnei-pilosis sed tum glabris, *laminis* 5–20 cm longis 14–45 mm latis chartaceis oblanceolatis cuneatis decurrentibus in apice subito subacuminatis supra glabris et obscure lucidis viridibus infra in midnervo adpresse brunnei-pilosulis et in nervis lateralibus minime pilosulis parte $\frac{3}{4}$ ultima remote crenatiserrata, nervis lateralibus 8–17 in quoque latere rectis adscendentibus tum proxima marginem interconnectis et ramulis in serris salientibus, cymis 1-floriferis sparse brunnei-pilosis ex axilibus foliosis, pedunculis 2–3 mm longis et in flore divergentibus, pedicelis in flore 2–6 mm longis in fructu 7–14 mm longis sparse brunnei-pilosis, bracteis duobus caducis 2.5–3 mm longis lanceolatis subadpressiter brunnei-pilosis densiter ad marginem sparsiter in dorso, *alabastris* 26–27 mm longis in vivo extra remotissime brunnei-pilosis intra densiter adpresse brunnei-pilosis fusiformibus corpore oblanceoloideo rostro 8–10 mm longo adscendenti arcuati vel subsigmoideo, lobis 5 subconnatis sed in apice labia supera cum 3 papillis et labia infera cum 2 papillis brevissimis, corpore et parte infera rostri in flore in sinu 10 mm longo apertis et ex eo flore exserto, *calycibus* 25–27 mm longis et a fructu

immature caducis, *corollis* 28 mm longis in vivo albis extra glabris tubo 20 mm longo sed in fauce capitati-glandulosi-puberulento cuneati-cylindrico in parte mediali in 40° deflecto in basi 3 mm diametro in medio 5 mm diametro in fauce 8 mm diametro et 5 mm lato, limbo bilabiato, labia supera in 80° ab axile deflecto, lobis binis 6 mm longis 7 mm latis suborbicularibus intra in parte $\frac{1}{2}$ infera capitati-glandulosi-puberulentis, labia infera 3-lobata lobis binis laterali-bus 8 mm longis 8.5 mm latis oblongi-suborbicularibus simulante puberulentibus, loba infera 9 mm longa 8.5 mm lata latiter elliptica pagina supera supra capitati-glandulosa excepta ad apicem et infra, staminibus binis inferis perfectis filamentis in tubo 4 mm ex basi adnatis parte libera 2.5 mm longa valide spiraliter curvata, antheris 3.5 mm longis conniventibus oblique et asymmetrice lati-ovatis, connectivo simulanti, staminodiis binis lateralibus in tubo 6 mm ex basi adnatis parte libera 0.3 mm longis antheroideo 0.7 mm longo translucens, staminodeo supero simulanti sed in tubo in 5.3 mm adnato, *stylis* 9.5 mm longo tereti glabro, stigmatibus cum lobis binis 3.5 mm longis 2.5 mm latis ellipticis in latere $\frac{2}{3}$ connatis, ovario 7 mm longo lineari-lanceoloideo glabro basi cum disco cupulato 1.8 mm alto cincto, *bacca* 15 mm longa 9 mm diametro ellipsoidea alba rostrata (bacca immatura 23×8 mm), seminibus 0.4–0.5 mm longis 0.23–0.25 mm diametro ellipsoideis mellaceis sed apicibus umbonatis brunneis corpore cum reticulis cellulosis polygonatis elongatis $\frac{1}{2}$ tam longis quam semine.

DIAGNOSIS OF HOLOTYPE: Shrub 2 m tall; stem 2 cm in diameter; branchlets glabrate, green to brownish, quadrangular terete, shrinking on drying; leaf scars separate 2.5–3 mm high, shield-shaped, stramineous, corky; bundle scars 5; young shoots covered with subappressed brown pilosity; leafy branchlets 2–4 mm in diameter, nearly terete, quickly glabrate; internodes 5–25 mm, mostly about 15 mm long; *leaves* opposite, not crowded, ascending, but a few older ones diverging, unequal, one of each pair being $\frac{1}{8}$ – $\frac{1}{2}$ the smaller, borne at the 5–10 upper nodes; petioles slender, 15–36 mm long, in youth appressed brown pilose but later glabrate; *blades* 5–20 cm long, 14–45 mm wide, chartaceous, oblanceolate and cuneate decurrent at base, the apex abruptly subacuminate, above

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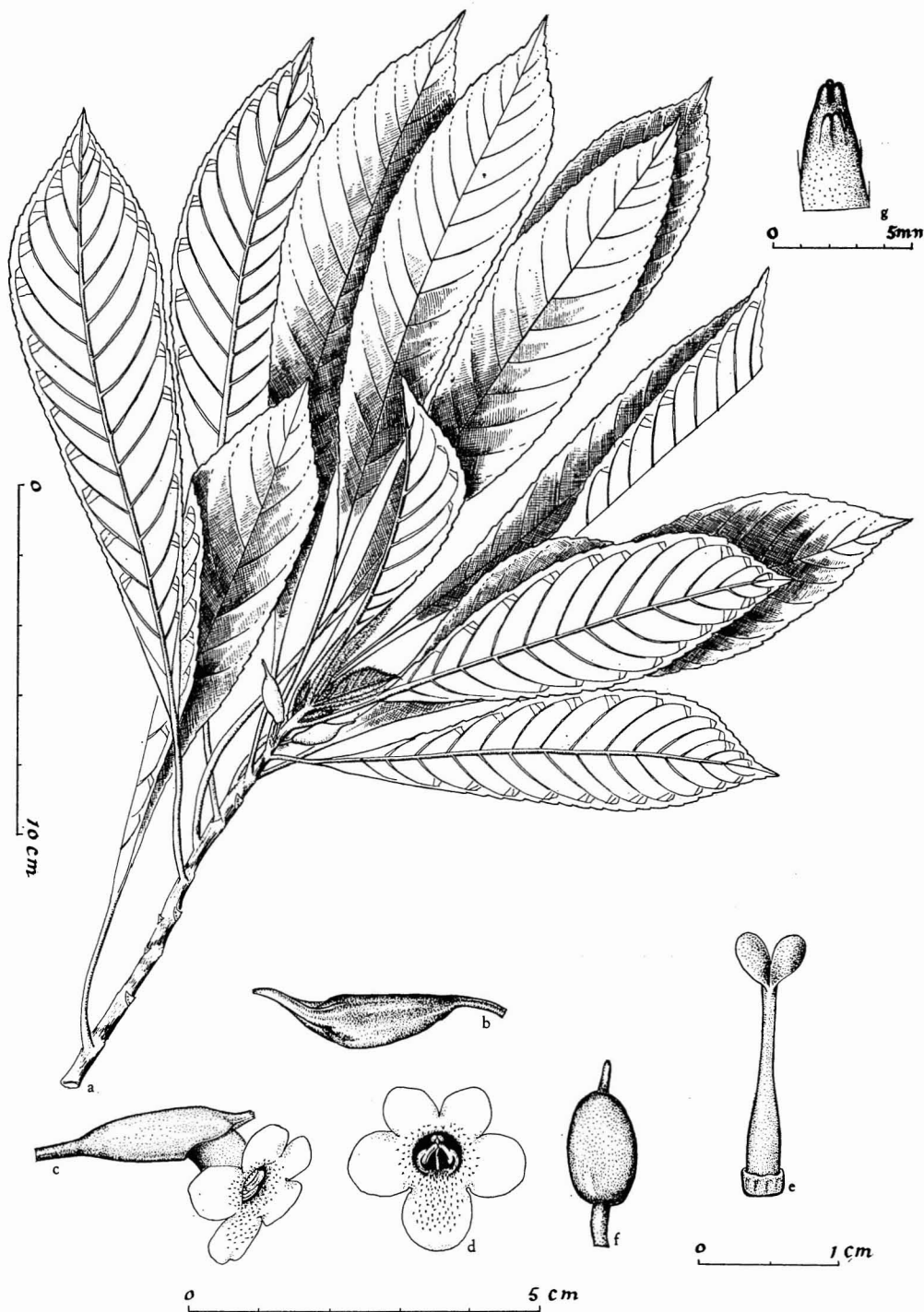


FIG. 1. *Cyrtandra megistocalyx* St. John, from holotype. *a*, Habit, $\times \frac{1}{2}$; *b*, bud, $\times 1$; *c*, *d*, flower, $\times 1$; *e*, pistil, $\times 2$; *f*, fruit, $\times 1$; *g*, apex of calyx, $\times 4$.

glabrous and dark shiny green, below finely appressed brown pilosulous on the midrib and slightly so on the lateral veins, the outer three-quarters coarsely remotely crenate serrate, the lateral veins 8–17 on a side, straight, ascending, then near the margin the tips inarching and branches salient in the serrae; cymes 1-flowered, from the leafy axils, sparsely brown pilose; peduncle 2–3 mm long, diverging in flower; pedicels 2–6 mm long in flower, 7–14 mm long in fruit, sparsely brown pilose; the paired bracts of the pedicel 2.5–3 mm long, caducous, lanceolate, brown subappressed pilose, sparsely so on the back, densely so near the margins; *buds* 26–27 mm long when fresh, without very remotely brown pilose, within closely appressed brown pilose, fusiform, but the body oblanceolate, the beak 8–10 mm long, ascending and arcuate or subsigmoid, the 5 lobes almost completely fused, but at apex of the upper lip there are 3 minute tips like rounded nipples, and 2 shorter ones of the lower lip, the body and lower part of the beak at anthesis opening by a distal slit 10 mm long, through which the corolla protrudes; *calyx* 25–27 mm long, caducous from the young developing fruit; *corolla* 28 mm long when fresh, white, glabrous without, the tube 20 mm long, glabrous except for the throat which is capitate glandular puberulent, cuneate-cylindric, but at mid-point deflected at 40° from the axis of the lower tube, at base 3 mm in diameter, at the middle 5 mm, at the throat 8 mm high and 5 mm wide, limb 2-lipped, 5-lobed, upper lip spreading at 80° to the axis of the throat, the two lobes 6 mm long, 7 mm wide, suborbicular, within capitate glandular puberulent on lower half; lower lip 3-lobed; the two lateral lobes 8 mm long, 8.5 mm wide, oblong suborbicular, with similar glandular puberulence; lower lobe 9 mm long, 8.5 mm wide, broadly elliptic, the upper surface capitate glandular except near the tip and below; the two lower stamens perfect, their filaments adnate to the corolla tube to within 4 mm of the throat, the free portion 2.5 mm long, stout, spirally upcurved; the two perfect anthers 3.5 mm long, connivent, obliquely and asymmetrically broad ovate, the connective similar

in shape; the two lateral staminodia adnate to the corolla to within 6 mm of the throat, the free filament tips 0.3 mm long, bearing an antheroid tip 0.7 mm long, translucent; the upper staminodium similar but attached 0.7 mm lower down on the corolla tube; *style* 9.5 mm long, terete, glabrous; the two stigmatic lobes 3.5 mm long, 2.5 mm wide, elliptic, connate $\frac{2}{5}$ way up the proximal side; ovary 7 mm long, linear lanceoloid, glabrous, the base surrounded by a cupulate disk 1.8 mm high; *berry* (a ripe one) 15 mm long, 9 mm in diameter, ellipsoid, white, rostrate by the base of the style (one immature berry is larger, 23×8 mm); seeds 0.4–0.5 mm long, 0.23–0.25 mm in diameter, ellipsoid, honey-colored but the umbonate ends brown, the body covered with elongate polygonal cellular reticulations $\frac{1}{5}$ as long as the seed.

HOLOTYPE: Hawaiian Islands, Oahu, Kahanā, Waiahole Ditch Trail, Gulch no. 17, moist wooded gulch among *Metrosideros*, rare, 800 ft alt., May 2, 1954, *H. St. John* 25,297 (BISH).

DISCUSSION: *C. megistocalyx* is a member of the section *Cylindrocalyces*, as is its closest relative, *C. paludosa* Gaud. var. *paludosa*, a plant with the cymes 1–7-flowered; peduncles 3–14 mm long; pedicels 6–21 mm long; bracts 3–8 mm long; calyx 10–20 mm long at anthesis, splitting into 2 lips and 5 lobes 2–10 mm long; corolla tube glabrous; anthers 2 mm long, the connective asymmetrically broad ovate; style 6–8.5 mm long; and the stigmatic lobes 3 mm long. *C. megistocalyx* has the cymes 1-flowered; peduncles 2–3 mm long; pedicels 2–6 mm long in flower; bracts 2.5–3 mm long; calyx 25–27 mm long at anthesis permanently united and the 5 lobes represented only by minute nipple-like tips; corolla tube capitate glandular puberulent in the throat; anthers 3.5 mm long, the connective circular; style 9 mm long; and the stigmatic lobes 3.5 mm long.

The new epithet is formed from the Greek adjective *megistos*, larger; and the noun *calux*, cup or calyx, and is given with reference to the large-sized calyx.